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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,014	05/10/2001	Steven Paolini	M-9593 US	8139

24251 7590 09/03/2003

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EXAMINER

ERDEM, FAZLI

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/854,014

Applicant(s)

PAOLINI ET AL.

Examiner

Fazli Erdem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 10, 11, 13-16 is/are rejected.
- 7) ☒ Claim(s) 3-9, 12, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 3-9, 12, 17, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 15 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Bruning et al. (US 2002/0070914 A1) in view of Hayashi et al. (US 2002/0015297) further in view of Yoshihara et al. (6,115,016) further in view of Fullmer (5,406,268) further in view of Kitai et al. (US 2002/0163606)

Regarding Claims 1,2,15, and 16, Bruning et al. disclose control and drive circuit arrangement for illumination performance enhancement with LED light sources, where a backlight for an LCD display comprised of an array of LEDs. The backlight may be driven and controlled by a fast pulse power converter, thus providing a response time for the backlight on the order of microseconds. Bruning et al. fail to disclose the light guide and LED/light guide relationship. However, Hayashi et al. disclose a lighting unit where the required light guide is

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disclosed. Furthermore, Yoshihara et al. disclose a liquid crystal displaying apparatus and displaying control method therefor where the required LED/light guide relationship is disclosed.

Bruning et al., Hayashi et al. and Yoshihara et al. combination fail to disclose the required light directing means and light/filter structures. However, Fullmer discloses a portable microcomputer with power-sparing system of illuminated indicators where the required light directing means disclosed. Furthermore, Kitai et al. disclose a liquid crystal display devices having an electroluminescent backlight assembly where the required light/filter structure is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required light directing means the light/filter structures in Bruning et al., Hayashi et al., and Yoshihara et al. combination as taught by Fullmer and Kitai et al. respectively in order to have a liquid crystal display device with better performance.

3. Claims 10 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Bruning et al. (US 2002/0070914 A1) in view of Hayashi et al. (US 2002/0015297) further in view of Yoshihara et al. (6,115,016) further in view of Roberts et al. (US 2002/0191127 A1) further in view of Fullmer (5,406,268) further in view of Kitai et al. (US 2002/0163606).

Regarding Claims 10 and 11 Bruning et al. disclose control and drive circuit arrangement for illumination performance enhancement with LED light sources, where a backlight for an LCD display comprised of an array of LEDs. The backlight may be driven and controlled by a fast pulse power converter, thus providing a response time for the backlight on the order of microseconds. Bruning et al. fail to disclose the light guide and LED/light guide relationship.

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However, Hayashi et al. disclose a lighting unit where the required light guide is disclosed.

Furthermore, Yoshihara et al. disclose a liquid crystal displaying apparatus and displaying control method therefor where the required LED/light guide relationship is disclosed.

Roberts et al. disclose polarizer removal in a microdisplay system where a display includes a display, a first polarizer and a second polarizer. The polarizers can be located at a distance from the image plane of the display to remove the visibility of optical defects located within the polarizer or between the polarizer and display. The display module can also include at least one lens for magnifying the image produced by the display. The display module can also include a backlight having a first polarizer, a second polarizer and a light source.

Bruning et al., Hayashi et al., Yoshihara et al. and Roberts et al. combination fail to disclose the required light directing means and light/filter structures. However, Fullmer discloses a portable microcomputer with power-sparing system of illuminated indicators where the required light directing means disclosed. Furthermore, Kitai et al. disclose a liquid crystal display devices having an electroluminescent backlight assembly where the required light/filter structure is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required light directing means the light/filter structures in Bruning et al., Hayashi et al., Yoshihara et al., and Roberts et al. combination as taught by Fullmer and Kitai et respectively in order to have a liquid crystal display device with better performance.

4. Claims 13 and 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Bruning et al. (US 2002/0070914 A1) in view of Hayashi et al. (US 2002/0015297) further in view of Yoshihara et al. (6,115,016) further in view of Rand et al. (6,521,879) further in view of Fullmer (5,406,268) further in view of Kitai et al. (US 2002/0163606).

Regarding Claims 13 and 14, Bruning et al., Hayashi et al., and Yoshihara et al. combination fail to disclose the method performed by the required liquid crystal display device. However, Rand et al. disclose method and system for controlling an LED backlight in flat panel displays wherein illumination monitoring is done outside the viewing area where the required method is disclosed.

Bruning et al., Hayashi et al., Yoshihara et al. and Rand et al. combination fail to disclose the required light directing means and light/filter structures. However, Fullmer discloses a portable microcomputer with power-sparing system of illuminated indicators where the required light directing means disclosed. Furthermore, Kitai et al. disclose a liquid crystal display devices having an electroluminescent backlight assembly where the required light/filter structure is disclosed.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required light directing means the light/filter structures in Bruning et al., Hayashi et al., Yoshihara et al., and Rand et al. combination as taught by Fullmer and Kitai et respectively in order to have a liquid crystal display device with better performance.

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Conclusion

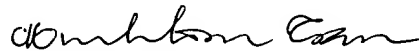
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (703) 305-3868. The examiner can normally be reached on M - F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

FE

August 25, 2003


Minh Loan Tran
Primary Examiner